2.3.2 Fieldwork - Groundwater Monitoring and Sampling

BRC will notify the Los Angeles Regional Water Quality Control board (LARWQCB) a minimum of one week prior to the start of groundwater monitoring events. The following activities will be performed:

1. Water Level Gauging

   Prior to sampling each monitoring well, depth to groundwater will be measured in each well to the nearest one-hundredth of a foot using an electronic water level sounder. Data from the well gauging will be recorded in the Well Gauging Data Sheet (Appendix A) as well as the Boeing Data Management Plan (DMP) electronic form for upload to the project database (Appendix B). Monitoring well vapor concentration measurements will be recorded with a photo-ionization detector (PID) following the removal of the well cap and also recorded on the Well Gauging Data Sheet. All groundwater monitoring wells will be gauged within a single 24-hour period.

2. Well Purging and Sampling

   Groundwater monitoring wells will be sampled spatially from low historic concentration locations to high historic concentration locations. Table 2 provides a recommended groundwater monitoring and well sampling order based on the January and July, 2001 groundwater monitoring data. Following well gauging, each well will be purged by extracting a minimum of three wetted well casing volumes of standing water with a pump. Purged water will be periodically monitored for temperature, pH, and specific conductance and recorded on the Groundwater Sampling Data Sheet (Appendix A). Purging will be completed when five well volumes have been removed, or when three consecutive measurements of specific conductance, pH, and temperature give values within 10% of each other.

   Dissolved oxygen (DO) and oxidation reduction potential (ORP) parameters will also be measured in select wells per Table 2. These parameters will be collected and recorded in accordance with the Standard Operating Procedures for Measuring Natural Attenuation Parameters (England Geosystem and Haley & Aldrich, 2001).

   After well purging parameters have stabilized, groundwater samples will be collected from the pump discharge in appropriate containers. Samples will be stored on ice in a cooler and transported by courier to a California-certified analytical laboratory for analysis under proper chain-of-custody. Chain-of-custody forms will be maintained throughout sample collection and transport. An example of the chain-of-custody form is provided in Appendix A. The